

REMARKS

Reconsideration of the application in view of the above amendments and the following remarks is requested. Claims 16-35 are in this application. Claims 1-15 have been cancelled. Claims 16-35 have been added to alternately and additionally claim the present invention. In addition, claims 16-22 and 24-35 are believed to read on the side wall mounting species, while claim 23 is believed to read on the door mounted species. Further, the specification has been amended to revise the Summary of the Invention section.

Applicant requests the Examiner to initial and return a copy of the PTO Form 1449 filed with the applications on April 9, 2004.

The Examiner rejected claims 1-9 under 35 U.S.C. §102(b) as being anticipated by, or in the alternative, under 35 U.S.C. §103(a) as being unpatentable over Reinhard (U.S. Patent No. 4,386,651). The Examiner also rejected claims 1-5 and 9 under 35 U.S.C. §102(b) as being anticipated by, or in the alternative, under 35 U.S.C. §103(a) as being unpatentable over Kormos (DE 197737531).

The Examiner additionally rejected claims 1-9 under 35 U.S.C. §103(a) as being unpatentable over Kormos in view of Reinhard. Further, the Examiner rejected claims 1-9 under 35 U.S.C. §103(a) as being unpatentable over any of the applied prior art in view of Takala (U.S. Patent No. 6,494,252). As noted above, claims 1-15 have been cancelled. Thus, for the reasons set forth below, applicant respectfully traverses these rejections as applied to new claims 16-35.

Claim 16 has been amended and recites:

"an enclosure, an exterior surface of the enclosure having a lower air opening, an upper air opening, a number of lower mounting openings formed around the lower air opening, and a number of upper mounting openings formed around the upper air opening, the upper mounting openings not being formed around the lower air opening; and

"a heat exchanger attached to the enclosure such that an interior of the enclosure and an interior region of the heat exchanger form an air tight and water tight unit, no part of the heat exchanger extending into the enclosure."

In rejecting the claims over Reinhard, the Examiner pointed to FIGS. 1 and 5 as teaching all of the limitations required by the claims. However, the electronic cabinet shown in FIG. 1 of Reinhard can not be read to be the electronics cabinet required by new claim 16 because the exterior surface of the enclosure in Reinhard does not have a number of lower and upper mounting openings that are formed around the lower and upper air openings, respectively.

As shown in FIG. 6 of Reinhard, the exterior surface 0 of the enclosure has a small lower opening that allows air to flow out of the enclosure into the opening 9 in the heat exchanger, and a very large upper opening that allows air from the much smaller opening 15 in the heat exchanger to flow back into the enclosure. Further, as shown in FIG. 1 of Reinhard, heat exchanger 1 is attached to the exterior surface of the enclosure by four flange attachments 16, two on each side of heat exchanger 1. (See also column 3, lines 48-49 of Reinhard.)

Thus, if the small lower opening shown in FIG. 6 of Reinhard is read to be the lower opening in the exterior surface as required by claim 16, and the very large upper opening shown in FIG. 6 of Reinhard is read to be the upper opening in the exterior surface as required by claim 16, then the four mounting openings formed through the exterior surface of the enclosure (that coincide with the openings in the flange attachments 16) can not be read to be the lower and upper mounting

openings required by claim 16 because the four mounting openings are not formed around the small lower opening and the very larger upper opening in the exterior surface of the enclosure.

Thus, since Reinhard fails to teach or suggest an electronic cabinet with an exterior surface that has a number of lower and upper mounting openings that are formed around the lower and upper air openings, respectively, claim 16 is not anticipated by and is patentable over Reinhard. In addition, since claims 17-35 depend either directly or indirectly from claim 16, claims 17-35 are not anticipated by and are patentable over Reinhard for the same reasons as claim 16.

With further respect to new claim 17, this claim recites:

“a minimum vertical separation between the lower air opening and the upper air opening is greater than a vertical distance across the upper air opening.”

The Reinhard reference also fails to teach or suggest this limitation. As shown in FIG. 6 of Reinhard, rather than teaching that the minimum vertical separation between the small lower opening and very large upper opening is greater than the vertical distance across the very large upper opening, Reinhard instead teaches that the minimum vertical separation between the small lower opening and the very large upper opening is much, much smaller than the vertical distance across the very large upper opening. Thus, claim 17 is not anticipated by and is patentable over Reinhard for this additional reason.

With further respect to new claim 24, this claim recites:

"the heat exchanger includes an exterior plate, the exterior plate of the heat exchanger having a lower air opening, an upper air opening, a number of lower mounting openings formed around the lower air opening in the exterior plate, and a number of upper mounting openings formed around the upper air opening in the exterior plate, a size of the upper air opening in the exterior surface being less than a size of the upper air opening in the exterior plate."

The Reinhard reference further fails to teach or suggest this limitation. As shown in FIG. 6 of Reinhard, rather than teaching that the size of the very large upper opening in exterior surface 0 is less than a size of the opening 15 in heat exchanger 1, Reinhard instead teaches that the size of the very large upper opening in exterior surface 0 is much, much larger than the size of the opening 15 in heat exchanger 1. Thus, claim 24 is not anticipated by and is patentable over Reinhard for this further reason.

With further respect to new claim 32, this claim recites:

"the exterior surface includes a top air opening spaced apart from the upper air opening, the upper mounting openings being formed around the top air opening."

The Reinhard reference further fails to teach or suggest this limitation. As shown in FIG. 6 of Reinhard, rather than teaching that the exterior surface 0 of the enclosure includes another air opening, Reinhard instead teaches that the exterior surface 0 includes only two air openings; the small lower opening and the very large upper opening. Thus, claim 32 is not anticipated by and is patentable over Reinhard for this additional reason.

With respect to Kormos, the Examiner pointed to FIGS. 8 and 9 as teaching a heat exchanger that is mounted to an exterior surface of an electronic cabinet.

However, rather than teaching that no portion of the heat exchanger lies within the enclosure as required by claim 16, FIGS. 8 and 9 of Kormos instead teach that a significant portion of the heat exchanger lies within the enclosure.

Thus, since Kormos fails to teach or suggest an electronic cabinet where no portion of the heat exchanger extends into the enclosure, claim 16 is not anticipated by and is patentable over Kormos. In addition, since claims 17-24 depend either directly or indirectly from claim 16, claims 17-24 are not anticipated by and are patentable over Kormos for the same reasons as claim 16.

With respect to Kormos and further in view of Reinhard, the Examiner argued that it would have been obvious to have reversed the rotation of the fans in Kormos so that the flows would have been the same as shown in FIG. 5 of Reinhard to improve cooling at the upper end of the cabinet. However, regardless of the direction of the airflow, the Kormos reference fails to teach or suggest that no portion of the heat exchanger extends into the enclosure. Thus, as noted above, since Kormos fails to teach or suggest an electronic cabinet where no portion of the heat exchanger extends into the enclosure, claims 16-24 are not anticipated by and are patentable over Kormos in view of Reinhard.

With respect to Reinhard and/or Kormos and further in view of Takala, the Examiner noted that Takala is cited to show that electronic cabinets have doors, and that a heat exchanger is mounted to a side wall of the cabinet. However, the Takala reference does not show a heat exchanger mounted to a side wall of an enclosure, but instead shows a cooling system 3 (a heat exchanger) that is attached to the enclosure 1 so that the cooling system 3 forms a back wall of the enclosure 1. (See column 3, lines 45-48 of Takala.) Thus, rather than being attached to a side wall, cooling system 3 forms the side wall of the enclosure 1.

Further, unlike claim 16 that requires an electronics cabinet where no part of the heat exchanger extends into the enclosure, FIG. 1 of Takala instead shows that a significant portion of cooling system 3 extends into enclosure 1. Thus, since

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Takala fails to teach or suggest an electronics cabinet where no portion of the heat exchanger extends into the enclosure, claims 16-24 are not anticipated by and are patentable over Reinhard and/or Kormos in view of Takala.

Thus, for the foregoing reasons, it is submitted that all of the claims are in a condition for allowance. Therefore, the Examiner's early re-examination and reconsideration are respectively requested.

Respectfully submitted,

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